July 16, 2003

OSWER Docket
EPA Docket Center
ENVIRONMENTAL PROTECTION AGENCY
Mail code: 5305T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Attention Docket ID No. RCRA-2003-0012

I am pleased to provide comment regarding management of hazardous waste in laboratories (Docket Number RCRA-2003-0012). As EPA is aware, there have been some aspects of the RCRA regulations as they apply to laboratories that have been problematic at colleges and universities. Although the process to get to this point has been slow, I am pleased EPA is now considering changes in the RCRA regulations.

HAZARDOUS WASTE DETERMINATON:

When should the hazardous waste determination be made in the laboratory setting?
In cases of routine disposal I don't have a problem with it being done in the laboratory. It is only when there is a laboratory clean out or a faculty member leaves that I would like to see an option to do a determination elsewhere or have it temporarily delayed. A laboratory clean out could consist of anywhere from dozen to several hundred chemicals. The ability to delay or do a determination out of the laboratory, provide opportunity to recycle material elsewhere within the university, or efficiently pack them in the laboratory avoiding movement of many different chemicals over a period of time.

What training is needed for lab personnel concerning hazardous waste determinations?
Lab personnel should have a general overview of the RCRA regulations but the focus should be on the management activities they have with hazardous waste in the laboratories.

How should waste be labeled so it can be appropriately managed as hazardous waste?
I think the existing labeling system is fine. I worry that if an alternate system is developed different than industry, then this could lead to confusion. For example, laboratory waste could be labeled one way, while other waste in facilities at the same university could be labeled in a different manner. Since colleges and universities train the new workers and leaders of the future, it seems important to me that everyone label hazardous waste the same way.

Where should the hazardous waste determination be made?
For waste that is generated in the laboratory routinely (e.g., most typically mixed solvents, acid wastes) I think the waste determination should be done in the laboratory. For laboratory clean outs as noted above, I think it is preferable to do it in the laboratory the day it is going to be removed, or in the 90 / 180 day storage area to take advantage of opportunities to recycle the material elsewhere within the university.

SATELLITE ACCUMLATION AREA:

How should these requirements be applied in a laboratory context?
The federal requirements of up to 55 gallons of hazardous waste and up to 1 quart of acutely hazardous waste in a satellite accumulation area before it has to be removed within three days is generally reasonable. However, in the Commonwealth of Massachusetts any full container (of any size) must be removed from the satellite accumulation area within three days. The state specific requirement is an extreme burden (costs) to the colleges and universities of Massachusetts. It results in wasted resources and forces colleges and universities to move chemicals around all the time (instead of an efficient scheduling). This constant movement of chemicals to meet the Massachusetts "three day rule" is certainly less protective of the environment (constant movement of chemicals equals increased risk). Although this is an issue generators must take up with the state, EPA could assist by recommending the state come more in line with the federal requirement.

How often do laboratories accumulate more than 55 gallons of waste in their SAA?
They accumulate this quantity very infrequently.

What if any, difficulties do environmental health and safety personnel have responding to waste pick-up calls within the three-day time limit?
It can be difficult at times and it is not efficient use of resources. Extending to a week and preferably to 30 days would be a big improvement. Thirty days would allow you to put waste on an efficient schedule for pick-up. Having up to 30 days will allow me flexibility if the laboratory occupants are on vacation or the vendor needs to cancel and come the following week. Some schools have small staff or need to outsource the pick-up service. The three-day rule gives no flexibility if some staff our on vacation, leave or need to temporarily dedicate resources to other areas. Work that is outsourced becomes unnecessarily more expensive because you may need to bring a vendor in twice a week instead of on a more efficient weekly or other schedule.

How would a longer time frame for removal impact the cost of waste management and the ability to protect human health and the environment?
The cost of removal would be decreased for my institution because we currently outsource this service. Instead of the need to bring a vendor in up to two times a week (again, I'm stuck with Massachusetts requirements), my institution would be able to set up a more efficient weekly or other schedule. There are no chemical differences between hazardous waste and hazardous materials that are stored in the laboratory. They are both stored securely in the laboratory, kept in appropriate containers and managed by competent staff. For these reasons, there is no increased risk or impact on human health, safety or the environment if hazardous waste is allowed to stay in the laboratory for up to 30 days.

TREATMENT IN SATELLITE ACCUMULATION AREAS:

What types of treatment, other than neutralization, are laboratory personnel currently performing or would like to perform?

The Massachusetts regulations allow treatment if the process is "continuous and integral to the manufacturing process". The reference to industry is confusing and makes one wonder if this type of treatment is allowed in a laboratory in Massachusetts. Precipitation of metals is one treatment that has been requested by a number of our laboratory personnel at my institution. Some di and tri nitro compounds need to be treated with water at times in order to be shippable as a flammable solid per DOT requirements. Northeastern University has benefited from the use of a solvent recycling system (we recycle acetone from a glass washing operation), which is allowed in Massachusetts. This is something that could be done in many laboratories. Two good references for treatment of wastes in laboratories are as follows:

1. Destruction of Hazardous Chemicals in the Laboratory by George Lunn and Eric B. Sansone Wiley-Interscience, John Wiley & Sons, Inc., 1994, 501 pp.
2. Prudent Practices in the Laboratory; Handling and Disposal of Chemicals by the National Research Council, National Academy Press, 1995. 427 pp.

What would be the benefits of the desired types of treatment?
The ability to treat some waste in the laboratory would decrease costs for disposal for some chemicals, avoid the need to transport materials to sometimes distance locations and in some cases, provide a better treatment option than may be available commercially.

I appreciate the opportunity to comment and hope this will be beneficial to your efforts.

Sincerely,

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